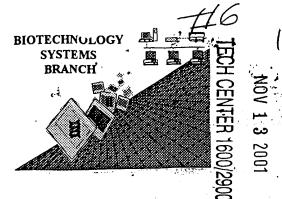
RAW SEQUENCE LISTING ERROR REPORT



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number:	09/677,822	
Source:	0186	<u>'</u>
Date Processed by STIC:	1/27/2021	

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,

2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216. PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax) PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE <u>CHECKER</u> <u>VERSION 3.0 PROGRAM</u>, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:

http://www.uspto.gov/web/offices/pac/checker

OIPE

DATE: 07/27/2001 RAW SEQUENCE LISTING TIME: 10:10:42 PATENT APPLICATION: US/09/677,822

Input Set : A:\GC527C2-seqlist.txt Output Set: N:\CRF3\07272001\1677822.raw

```
pr45
      3 <110> APPLICANT: Estell, David
             Harding, Fiona
      6 <120> TITLE OF INVENTION: PROTEINS PRODUCING AN ALTERED IMMUNOGENIC RESPONSE AND
              METHODS OF MAKING AND USING THE SAME
      9 <130> FILE REFERENCE: GC527C2
     11 <140> CURRENT APPLICATION NUMBER: US 09/677,822
C--> 12 <141> CURRENT FILING DATE: 2001-07-23
     14 <150> PRIOR APPLICATION NUMBER: US 09/500,135
                                                                          Does Not Comply
     15 <151> PRIOR FILING DATE: 2000-02-08
                                                                      Corrected Diskette Needed
     17 <150> PRIOR APPLICATION NUMBER: US 09/060,872
     18 <151> PRIOR FILING DATE: 1998-04-15
     20 <160> NUMBER OF SEQ ID NOS: 240
     22 <170> SOFTWARE: PatentIn Ver. 2.1
     24 <210> SEQ ID NO: 1
     25 <211> LENGTH: 1495
     26 <212> TYPE: DNA
     27 <213> ORGANISM: Bacillus amyloliquefaciens
     29 <220> FEATURE:
     30 <221> NAME/KEY: mat_peptide
     31 <222> LOCATION: (417)..(1495)
     33 <220> FEATURE:
     34 <221> NAME/KEY: CDS
     35 <222> LOCATION: (96)..(1244)
     37 <220> FEATURE:
     38 <221> NAME/KEY: misc_feature
     39 <222> LOCATION: (582)..(584)
     40 <223> OTHER INFORMATION: The nnn at positions 582 through 584 which in a
            preferred embodiment (aat) is to code for
            asparagine, but which may also code for proline.
     44 <220> FEATURE:
     45 <221> NAME/KEY: misc_feature
     46 <222> LOCATION: (585)..(587)
    47 <223> OTHER INFORMATION: The nnn at positions 585 through 587 which in a
              preferred embodiment (cct) is to code for proline,
     49
             but which may also code for asparagine.
     51 <220> FEATURE:
     52 <221> NAME/KEY: misc_feature
     53 <222> LOCATION: (597)..(599)
    54 <223> OTHER INFORMATION: The nnn at positions 597 to 599 which in a
             preferred embodiment (aac) is to code for
             asparagine, but which may also code for aspartic acid.
    58 <220> FEATURE:
    59 <221> NAME/KEY: misc_feature
     60 <222> LOCATION: (678)..(680)
    61 <223> OTHER INFORMATION: The nnn at positions 678 through 680 which in a
             preferred embodiment (gca) is to code for
    62
```

alanine, but which may also code for serine.

TECH CENTER 1600/2900

```
RAW SEQUENCE LISTING DATE: 07/27/2001
PATENT APPLICATION: US/09/677,822 TIME: 10:10:42
```

Input Set : A:\GC527C2-seqlist.txt
Output Set: N:\CRF3\07272001\1677822.raw

```
65 <220> FEATURE:
66 <221> NAME/KEY: misc_feature
67 <222> LOCATION: (681)..(683)
68 <223> OTHER INFORMATION: The nnn at positions 681 through 683 which in a
         preferred embodiment (tca) is to code for serine,
        but which may also code for alanine.
70
72 <220> FEATURE:
73 <221> NAME/KEY: misc_feature
74 <222> LOCATION: (708)..(710)
75 < 223 > OTHER INFORMATION: The nnn at positions 708 through 710 which in a
         preferred embodiment (gct) is to code for
76
         alanine, but which may also code for aspartic acid.
77
79 <220> FEATURE:
80 <221> NAME/KEY: misc_feature
81 <222> LOCATION: (711)..(713)
82 <223> OTHER INFORMATION: The nnn at positions 711 through 713 which in a
         preferred embodiment (gac) is to code for
         aspartic acid, but which may also code for alanine.
84
86 <220> FEATURE:
87 <221> NAME/KEY: misc_feature
88 <222> LOCATION: (888)..(890)
89 <223> OTHER INFORMATION: The nnn at positions 888 through 890 which in a
         preferred embodiment (act) is to code for
90
         threonine, but which may also code for serine.
93 <220> FEATURE:
94 <221> NAME/KEY: misc_feature
95 <222> LOCATION: (891)..(893)
96 <223> OTHER INFORMATION: The nnn at positions 891 through 893 which in a
         preferred embodiment (tcc) is to code for
         serine, but which may also code for threonine.
98
100 <220> FEATURE:
101 <221> NAME/KEY: misc_feature
102 <222> LOCATION: (1167)..(1169)
103 <223> OTHER INFORMATION: The nnn at positions 1167 through 1169 which in
          a preferred embodiment (gaa) is to code for
104
          glutamic acid, but which may also code for glutamine.
105
107 <400> SEQUENCE: 1
108 ggtctactaa aatattattc catactatac aattaataca cagaataatc tgtctattgg 60
                                                                       113
110 ttattctgca aatgaaaaaa aggagaggat aaaga atg aga ggc aaa aaa gta
                                           Met Arg Gly Lys Lys Val
111
                                                   -105
112
114 tgg atc agt ttg ctg ttt gct tta gcg tta atc ttt acg atg gcg ttc
                                                                       161
115 Trp Ile Ser Leu Leu Phe Ala Leu Ala Leu Ile Phe Thr Met Ala Phe
                            -95
                                                                       209
118 ggc agc aca tcc tct gcc cag gcg gca ggg aaa tca aac ggg gaa aag
119 Gly Ser Thr Ser Ser Ala Gln Ala Ala Gly Lys Ser Asn Gly Glu Lys
                                             -75
120 -85
                        -80
122 aaa tat att gtc ggg ttt aaa cag aca atg agc acg atg agc gcc gct
                                                                       257
123 Lys Tyr Ile Val Gly Phe Lys Gln Thr Met Ser Thr Met Ser Ala Ala
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/677,822

DATE: 07/27/2001
TIME: 10:10:42

Input Set : A:\GC527C2-seqlist.txt
Output Set: N:\CRF3\07272001\I677822.raw

	124					-65					-60					-55		
	126	aag	aag	aaa	gat	gtc	att	tct	gaa	aaa	ggc	ggg	aaa	gtg	caa	aag	caa	305
	127	Lys	Lys	Lys	Asp	Val	Ile	Ser	Glu	Lys	Gly	Gly	Lys	Val	Gln	Lys	Gln	
	128	-	•	•	-50					-45					40			
	130	ttc	aaa	t.a.t.	σta	gac	σca	act	tca	qct	aca	tta	aac	gaa	aaa	gct	gta	353
	131	Phe	LVS	Tyr	Val	Asp	Ala	Ala	Ser	Ăla	Thr	Leu	Asn	Glu	Lys	Ala	Val	
	132	1 110	LIS	-35	, 41				-30					-25	_			
		222	~~~		222	222	a a c	cca		atc	act	tac	att	gaa	αаа	gat	cac	401
	134	aaa T	gaa	LLY	Trra	Tuc	yac Aan	Dro	Cor	Val	λla	Tur	Val	Glu	Glu	Asn	His	
		гля		ьеи	ьуѕ	гÃР	ASP	-15	261	Val	AIG	1 7 1	-10	GIG	OIU	2135	1110	
	136		-20	4.					.	~+~	aat	+		at a	+ = =	G22	2++	449
	138	gta	gca	cat	gcg	tac	geg	cay	2	gra	Doo	Tac.	21	gta	Cor	Cln	Tlo	777
			Ala	His	Ата			GIn	ser	val		TAL	СТА	Val	ser	10	TTE	
	140	- 5				-1	1				. 5							407
	142	aaa	gcc	cct	gct	ctg	cac	tct	caa	ggc	tac	act	gga	tca	aat	gtt	aaa -	497
	143	Lys	Ala	Pro	Ala	Leu	His	Ser	Gln		Tyr	Thr	GTA	Ser		vaı	ьys	
	144				15					20					25			
	146	gta	gcg	gtt	atc	gac	agc	ggt	atc	gat	tct	tct	cat	cct	gat	tta	aag	545
	147	Val	Ala	Val	Ile	Asp	Ser	Gly	Ile	Asp	Ser	Ser	His	Pro	Asp	Leu	Lys	
	148			30					35					. 40				
W ² /+>	150	gta	gca	ggc	gga	gcc	agc	atg	gtt	cct	tct	gaa	aca	nnn	nnn	ttc	caa	593
w\{->	151	Val	Ala	Gly	Gly	Ala	Ser	Met	Val	Pro	Ser	G1u	Thr	Xaa	Xaa	Phe	Gln	
-	152		45	-	_			50					55					
Ω14>		gac	nnn	aac	tct	cac	qqa	act	cac	gtt	gcc	ggc	aca	gtt	gcg	gct	ctt	641
	155	Asp	Xaa	Asn	Ser	His	Glv	Thr	His	Val	Ala	Gly	Thr	Val	Ala	Ala	Leu	
W							2											
٠	156	60					65					70		,			75	
[a] >	156 158	60 aat	aac	tca	atc	aat		tta	aac	att	aca		agc	nnn	nnn	ctt		689
	158	aat	aac Asn	tca	atc	ggt Glv	gta	tta Leu	ggc G1 v	gtt Val	gcg Ala	cca	agc Ser	nnn Xaa	nnn	ctt Leu	tac	689
*U.}	158 159	aat	aac Asn	tca Ser	atc Ile	Gly	gta	tta Leu	ggc Gly	gtt Val	Ala	cca	agc Ser	nnn Xaa	nnn	ctt Leu 90	tac	689
kly->	158 159 160	aat Asn	Asn	Ser	Ile	Gly 80	gta Val	Leu	Gly	Val	Ala 85	cca Pro	Ser	Xaa	nnn Xaa	Leu 90	tac Tyr	
kly->	158 159 160 162	aat Asn gct	Asn gta	Ser aaa	Ile gtt	Gly 80 ctc	gta Val ggt	Leu nnn	Gly nnn	Val ggt	Ala 85 tcc	cca Pro	Ser	Xaa tac	nnn Xaa agc	Leu 90 tgg	tac Tyr atc	689 737
kly->	158 159 160 162 163	aat Asn gct	Asn gta	Ser aaa	Ile gtt Val	Gly 80 ctc	gta Val ggt	Leu nnn	Gly nnn	Val ggt Gly	Ala 85 tcc	cca Pro	Ser	Xaa	nnn Xaa agc Ser	Leu 90 tgg	tac Tyr atc	
kly->	158 159 160 162 163 164	aat Asn gct Ala	Asn gta Val	Ser aaa Lys	Ile gtt Val 95	80 ctc Leu	gta Val ggt Gly	nnn Xaa	Gly nnn Xaa	yal ggt Gly 100	Ala 85 tcc Ser	cca Pro ggc Gly	Ser caa Gln	Xaa tac Tyr	nnn Xaa agc Ser 105	90 tgg Trp	tac Tyr atc Ile	737
kly->	158 159 160 162 163 164 166	aat Asn gct Ala att	Asn gta Val aac	Ser aaa Lys gga	gtt Val 95 atc	80 ctc Leu	gta Val ggt Gly	nnn Xaa	nnn xaa atc	yal ggt Gly 100 gca	Ala 85 tcc Ser	cca Pro ggc Gly	ser caa Gln atg	<pre>Xaa tac Tyr gac</pre>	nnn Xaa agc Ser 105 gtt	90 tgg Trp	tac Tyr atc Ile	
kly->	158 159 160 162 163 164 166	aat Asn gct Ala att	Asn gta Val aac	ser aaa Lys gga Gly	gtt Val 95 atc	80 ctc Leu	gta Val ggt Gly	nnn Xaa	nnn xaa atc Ile	yal ggt Gly 100 gca	Ala 85 tcc Ser	cca Pro ggc Gly	ser caa Gln atg	<pre>tac Tyr gac Asp</pre>	nnn Xaa agc Ser 105 gtt	90 tgg Trp	tac Tyr atc Ile	737
kly->	158 159 160 162 163 164 166 167 168	aat Asn gct Ala att Ile	gta Val aac Asn	aaa Lys gga Gly 110	gtt Val 95 atc Ile	Gly 80 ctc Leu gag Glu	gta Val ggt Gly tgg	nnn Xaa gcg Ala	nnn Xaa atc Ile 115	yal ggt Gly 100 gca Ala	Ala 85 tcc Ser aac Asn	cca Pro ggc Gly aat Asn	caa Gln atg Met	tac Tyr gac Asp 120	nnn Xaa agc Ser 105 gtt Val	90 tgg Trp att Ile	tac Tyr atc Ile aac Asn	737 785
kly->	158 159 160 162 163 164 166 167 168 170	aat Asn gct Ala att Ile	Asn gta Val aac Asn	ser aaa Lys gga Gly 110 ctc	gtt val 95 atc Ile	Gly 80 ctc Leu gag Glu	gta Val ggt Gly tgg Trp	nnn xaa gcg Ala	nnn xaa atc Ile 115 ggt	yal ggt Gly 100 gca Ala	Ala 85 tcc ser aac Asn	cca Pro ggc Gly aat Asn	<pre>caa Gln atg Met tta</pre>	tac Tyr gac Asp 120 aaa	nnn xaa agc ser 105 gtt Val	you tgg Trp att Ile gca	tac Tyr atc Ile aac Asn	737
kly->	158 159 160 162 163 164 166 167 168 170 171	aat Asn gct Ala att Ile	gta val aac Asn agc ser	ser aaa Lys gga Gly 110 ctc	gtt val 95 atc Ile	Gly 80 ctc Leu gag Glu	gta Val ggt Gly tgg Trp	nnn xaa gcg Ala tct ser	nnn xaa atc Ile 115 ggt	yal ggt Gly 100 gca Ala	Ala 85 tcc ser aac Asn	cca Pro ggc Gly aat Asn	caa Gln atg Met tta Leu	tac Tyr gac Asp 120	nnn xaa agc ser 105 gtt Val	you tgg Trp att Ile gca	tac Tyr atc Ile aac Asn	737 785
kly->	158 159 160 162 163 164 166 167 168 170 171	aat Asn gct Ala att Ile atg Met	gta val aac Asn agc ser 125	aaa Lys gga Gly 110 ctc Leu	gtt Val 95 atc Ile ggc Gly	Gly 80 ctc Leu gag Glu gga Gly	gta Val ggt Gly tgg Trp cct Pro	Leu nnn xaa gcg Ala tct ser 130	nnn xaa atc Ile 115 ggt Gly	yal ggt Gly 100 gca Ala tct Ser	Ala 85 tcc Ser aac Asn gct Ala	ggc Gly aat Asn gct Ala	caa Gln atg Met tta Leu 135	tac Tyr gac Asp 120 aaa Lys	agc ser 105 gtt Val gcg Ala	Yeu 90 tgg Trp att Ile gca Ala	tac Tyr atc Ile aac Asn gtt Val	737 785
kly->	158 159 160 162 163 164 166 167 168 170 171 172	aat Asn gct Ala att Ile atg Met	gta Val aac Asn agc Ser 125	ser aaa Lys gga Gly 110 ctc Leu	gtt val 95 atc Ile ggc Gly	80 ctc Leu gag Glu gga Gly	gta Val ggt Gly tgg Trp cct Pro	nnn xaa gcg Ala tct ser 130 ggc	nnn xaa atc 11e 115 ggt Gly	yal ggt Gly 100 gca Ala tct Ser	Ala 85 tcc ser aac Asn gct Ala	ggc Gly aat Asn gct Ala	caa Gln atg Met tta Leu 135 gcg	tac Tyr gac Asp 120 aaa Lys	nnn Xaa agc ser 105 gtt Val gcg Ala	you to see the	tac Tyr atc Ile aac Asn gtt Val	737 785
kly->	158 159 160 162 163 164 166 167 168 170 171 172	aat Asn gct Ala att Ile atg Met	gta Val aac Asn agc Ser 125	ser aaa Lys gga Gly 110 ctc Leu	gtt val 95 atc Ile ggc Gly	80 ctc Leu gag Glu gga Gly	gta val ggt Gly tgg Trp cct Pro	nnn xaa gcg Ala tct ser 130 ggc	nnn xaa atc 11e 115 ggt Gly	yal ggt Gly 100 gca Ala tct Ser	Ala 85 tcc ser aac Asn gct Ala	ggc Gly aat Asn gct Ala gtt Val	caa Gln atg Met tta Leu 135 gcg	tac Tyr gac Asp 120 aaa Lys	nnn Xaa agc ser 105 gtt Val gcg Ala	you to see the	tac Tyr atc Ile aac Asn gtt Val	737 785
MAS.	158 159 160 162 163 164 166 167 168 170 171 172 174 175	aat Asn gct Ala att Ile atg Met gat Asp	gta val aac Asn agc Ser 125 aaa Lys	aaa Lys gga Gly 110 ctc Leu gcc	gtt Val 95 atc Ile ggc Gly gtt Val	Gly 80 ctc Leu gag Glu gga Gly	gta val ggt Gly tgg Trp cct Pro	nnn xaa gcg Ala tct ser 130 ggc Gly	nnn xaa atc Ile 115 ggt Gly gtc val	yal ggt Gly 100 gca Ala tct ser gta Val	Ala 85 tcc ser aac Asn gct Ala gtc	ggc Gly aat Asn gct Ala	caa Gln atg Met tta Leu 135 gcg Ala	tac Tyr gac Asp 120 aaa Lys gca	nnn Xaa agc Ser 105 gtt Val gcg Ala	yeu 90 tgg Trp att Ile gca Ala ggt Gly	tac Tyr atc Ile aac Asn gtt Val aac	737 785 833
MAS.	158 159 160 162 163 164 166 167 168 170 171 172 174 175 176 178	aat Asn gct Ala att Ile atg Met gat Asp 140 gaa	gta val aac Asn agc Ser 125 aaa Lys	ser aaa Lys gga Gly 110 ctc Leu gcc Ala	gtt Val 95 atc Ile ggc Gly gtt Val	Gly 80 ctc Leu gag Glu gga Gly gca Ala	gta val ggt Gly tgg Trp cct Pro tcc ser 145 agc	nnn xaa gcg Ala tct ser 130 ggc Gly tca	min xaa atc Ile 115 ggt Gly gtc Val agc	yal ggt Gly 100 gca Ala tct Ser gta Val aca	Ala 85 tcc ser aac Asn gct Ala gtc Val	ggc Gly aat Asn gct Ala gtt Val 150 ggc	caa Gln atg Met tta Leu 135 gcg Ala	tac Tyr gac Asp 120 aaa Lys gca Ala	nnn Xaa agc ser 105 gtt Val gcg Ala gcc Ala	Leu 90 tgg Trp att Ile gca Ala ggt Gly aaa	tac Tyr atc Ile aac Asn gtt Val aac Asn 155 tac	737 785
kly->	158 159 160 162 163 164 166 167 168 170 171 172 174 175 176 178	aat Asn gct Ala att Ile atg Met gat Asp 140 gaa	gta val aac Asn agc Ser 125 aaa Lys	ser aaa Lys gga Gly 110 ctc Leu gcc Ala	gtt Val 95 atc Ile ggc Gly gtt Val	Gly 80 ctc Leu gag Glu gga Gly gca Ala	gta val ggt Gly tgg Trp cct Pro tcc ser 145 agc	nnn xaa gcg Ala tct ser 130 ggc Gly tca	min xaa atc Ile 115 ggt Gly gtc Val agc	yal ggt Gly 100 gca Ala tct Ser gta Val aca	Ala 85 tcc ser aac Asn gct Ala gtc Val	ggc Gly aat Asn gct Ala gtt Val 150 ggc	caa Gln atg Met tta Leu 135 gcg Ala	tac Tyr gac Asp 120 aaa Lys gca	nnn Xaa agc ser 105 gtt Val gcg Ala gcc Ala	Leu 90 tgg Trp att Ile gca Ala ggt Gly aaa Lys	tac Tyr atc Ile aac Asn gtt Val aac Asn 155 tac	737 785 833
MAS.	158 159 160 162 163 164 166 167 168 170 171 172 174 175 176 178 179	aat Asn gct Ala att Ile atg Met gat Asp 140 gaa Glu	gta Val aac Asn agc ser 125 aaa Lys	ser aaa Lys gga Gly 110 ctc Leu gcc Ala nnn xaa	gtt Val 95 atc Ile ggc Gly gtt Val nnn xaa	gag Glu gga Gly gca Ala ggc Gly 160	gta Val ggt Gly tgg Trp cct Pro tcc ser 145 agc ser	nnn xaa gcg Ala tct ser 130 ggc Gly tca ser	mnn xaa atc Ile 115 ggt Gly gtc Val agc ser	yal ggt Gly 100 gca Ala tct Ser gta Val aca Thr	Ala 85 tcc ser aac Asn gct Ala gtc Val gtg Val 165	ggc Gly aat Asn gct Ala gtt Val 150 ggc Gly	caa Gln atg Met tta Leu 135 gcg Ala tac	tac Tyr gac Asp 120 aaa Lys gca Ala cct	agc ser 105 gtt Val gcg Ala gcc Ala ggt Gly	Leu 90 tgg Trp att Ile gca Ala ggt Gly aaa Lys 170	tac Tyr atc Ile aac Asn gtt Val aac Asn 155 tac Tyr	737 785 833 881 929
MAS.	158 159 160 162 163 164 166 167 168 170 171 172 174 175 176 178 179 180 182	aat Asn gct Ala att Ile atg Met gat Asp 140 gaa Glu	aac Asn agc Ser 125 aaa Lys ggc Gly	ser aaa Lys gga Gly 110 ctc Leu gcc Ala nnn xaa	gtt Val 95 atc Ile ggc Gly gtt Val nnn xaa att	gag Glu gga Gly gca Ala ggc Gly 160 gca	gta Val ggt Gly tgg Trp cct Pro tcc Ser 145 agc ser	nnn xaa gcg Ala tct ser 130 ggc Gly tca ser	min xaa atc Ile 115 ggt Gly gtc Val agc ser	yal ggt Gly 100 gca Ala tct Ser gta Val aca Thr	Ala 85 tcc ser aac Asn gct Ala gtc Val 165 gac	ggc Gly aat Asn gct Ala gtt Val 150 ggc Gly	caa Gln atg Met tta Leu 135 gcg Ala tac Tyr	tac Tyr gac Asp 120 aaa Lys gca Ala cct Pro	agc ser 105 gtt Val gcg Ala gcc Ala ggt Gly	Leu 90 tgg Trp att Ile gca Ala ggt Gly aaa Lys 170 aga	tac Tyr atc Ile aac Asn gtt Val aac Asn 155 tac Tyr gca	737 785 833
MAS.	158 159 160 162 163 164 166 167 168 170 171 172 174 175 176 178 179 180 182	aat Asn gct Ala att Ile atg Met gat Asp 140 gaa Glu	aac Asn agc Ser 125 aaa Lys ggc Gly	ser aaa Lys gga Gly 110 ctc Leu gcc Ala nnn xaa	gtt Val 95 atc Ile ggc Gly gtt Val nnn xaa att	gag Glu gga Gly gca Ala ggc Gly 160 gca	gta Val ggt Gly tgg Trp cct Pro tcc Ser 145 agc ser	nnn xaa gcg Ala tct ser 130 ggc Gly tca ser	min xaa atc Ile 115 ggt Gly gtc Val agc ser	yal ggt Gly 100 gca Ala tct Ser gta Val aca Thr	Ala 85 tcc ser aac Asn gct Ala gtc Val 165 gac	ggc Gly aat Asn gct Ala gtt Val 150 ggc Gly	caa Gln atg Met tta Leu 135 gcg Ala tac Tyr	tac Tyr gac Asp 120 aaa Lys gca Ala cct Pro	agc ser 105 gtt Val gcg Ala gcc Ala ggt Gly	Leu 90 tgg Trp att Ile gca Ala ggt Gly aaa Lys 170 aga	tac Tyr atc Ile aac Asn gtt Val aac Asn 155 tac Tyr gca	737 785 833 881 929
MAS.	158 159 160 162 163 164 166 167 168 170 171 172 174 175 176 178 180 182 183 184	aat Asn gct Ala att Ile atg Met gat Asp 140 gaa Glu cct Pro	gta val aac Asn agc Ser 125 aaa Lys ggc Gly tct Ser	ser aaa Lys gga Gly 110 ctc Leu gcc Ala nnn xaa gtc Val	gtt val 95 atc Ile ggc Gly gtt val nnn xaa att Ile 175	gag Glu gga Gly gca Ala ggc Gly 160 gca Ala	gta Val ggt Gly tgg Trp cct Pro tcc Ser 145 agc ser gta Val	nnn xaa gcg Ala tct ser 130 ggc Gly tca ser	mnn xaa atc 11e 115 ggt Gly gtc Val agc ser gct Ala	yal ggt Gly 100 gca Ala tct Ser gta Val aca Thr gtt Val 180	Ala 85 tcc ser aac Asn gct Ala gtc Val gtg Val 165 gac Asp	ggc Gly aat Asn gct Ala gtt Val 150 ggc Gly agc Ser	caa Gln atg Met tta Leu 135 gcg Ala tac Tyr	tac Tyr gac Asp 120 aaa Lys gca Ala cct Pro	agc ser 105 gtt Val gcg Ala gcc Ala ggt Gly caa Gln 185	Leu 90 tgg Trp att Ile gca Ala ggt Gly aaa Lys 170 aga Arg	tac Tyr atc Ile aac Asn gtt Val aac Asn 155 tac Tyr gca Ala	737 785 833 881 929
MAS.	158 159 160 162 163 164 166 167 168 170 171 172 174 175 176 178 180 182 183 184	aat Asn gct Ala att Ile atg Met gat Asp 140 gaa Glu cct Pro	gta val aac Asn agc Ser 125 aaa Lys ggc Gly tct Ser	ser aaa Lys gga Gly 110 ctc Leu gcc Ala nnn xaa gtc Val	gtt val 95 atc Ile ggc Gly gtt val nnn xaa att Ile 175	gag Glu gga Gly gca Ala ggc Gly 160 gca Ala	gta Val ggt Gly tgg Trp cct Pro tcc Ser 145 agc ser gta Val	nnn xaa gcg Ala tct ser 130 ggc Gly tca ser	mnn xaa atc 11e 115 ggt Gly gtc Val agc ser gct Ala	yal ggt Gly 100 gca Ala tct Ser gta Val aca Thr gtt Val 180	Ala 85 tcc ser aac Asn gct Ala gtc Val gtg Val 165 gac Asp	ggc Gly aat Asn gct Ala gtt Val 150 ggc Gly agc Ser	caa Gln atg Met tta Leu 135 gcg Ala tac Tyr	tac Tyr gac Asp 120 aaa Lys gca Ala cct Pro	agc ser 105 gtt Val gcg Ala gcc Ala ggt Gly caa Gln 185	Leu 90 tgg Trp att Ile gca Ala ggt Gly aaa Lys 170 aga Arg	tac Tyr atc Ile aac Asn gtt Val aac Asn 155 tac Tyr gca Ala	737 785 833 881 929
MAS.	158 159 160 162 163 164 166 167 168 170 171 172 174 175 176 178 180 182 183 184 186	aat Asn gct Ala att Ile atg Met gat Asp 140 gaa Glu cct Pro	Asn gta val aac Asn agc Ser 125 aaa Lys ggc Gly tct Ser	ser aaa Lys gga Gly 110 ctc Leu gcc Ala nnn xaa gtc Val	gtt val 95 atc Ile ggc Gly gtt val nnn xaa att Ile 175 agc	gag Glu gga Gly gca Ala ggc Gly 160 gca Ala	gta Val ggt Gly tgg Trp cct Pro tcc Ser 145 agc ser gta Val	nnn xaa gcg Ala tct ser 130 ggc Gly tca ser ggc Gly cct	mnn xaa atc 11e 115 ggt Gly gtc Val agc ser gct Ala	yal ggt Gly 100 gca Ala tct Ser gta Val aca Thr gtt Val 180 ctt	Ala 85 tcc ser aac Asn gct Ala gtc Val 165 gac Asp	ggc Gly aat Asn gct Ala gtt Val 150 ggc Gly agc ser	caa Gln atg Met tta Leu 135 gcg Ala tac Tyr agc Ser	tac Tyr gac Asp 120 aaa Lys gca Ala ct Pro aac Asn	agc ser 105 gtt Val gcg Ala gcc Ala ggt Gly caa Gln 185 cct	Leu 90 tgg Trp att Ile gca Ala ggt Gly aaa Lys 170 aga Arg ggc	tac Tyr atc Ile aac Asn gtt Val aac Asn 155 tac Tyr gca Ala gta	737 785 833 881 929
MAS.	158 159 160 162 163 164 166 167 168 170 171 172 174 175 176 178 180 182 183 184 186	aat Asn gct Ala att Ile atg Met gat Asp 140 gaa Glu cct Pro	Asn gta val aac Asn agc Ser 125 aaa Lys ggc Gly tct Ser	ser aaa Lys gga Gly 110 ctc Leu gcc Ala nnn xaa gtc Val	gtt val 95 atc Ile ggc Gly gtt val nnn xaa att Ile 175 agc	gag Glu gga Gly gca Ala ggc Gly 160 gca Ala	gta Val ggt Gly tgg Trp cct Pro tcc Ser 145 agc ser gta Val	nnn xaa gcg Ala tct ser 130 ggc Gly tca ser ggc Gly cct	mnn xaa atc 11e 115 ggt Gly gtc Val agc ser gct Ala	yal ggt Gly 100 gca Ala tct Ser gta Val aca Thr gtt Val 180 ctt	Ala 85 tcc ser aac Asn gct Ala gtc Val 165 gac Asp	ggc Gly aat Asn gct Ala gtt Val 150 ggc Gly agc ser	caa Gln atg Met tta Leu 135 gcg Ala tac Tyr agc Ser	tac Tyr gac Asp 120 aaa Lys gca Ala cct Pro	agc ser 105 gtt Val gcg Ala gcc Ala ggt Gly caa Gln 185 cct	Leu 90 tgg Trp att Ile gca Ala ggt Gly aaa Lys 170 aga Arg ggc	tac Tyr atc Ile aac Asn gtt Val aac Asn 155 tac Tyr gca Ala gta	737 785 833 881 929

RAW SEQUENCE LISTING DATE: 07/27/2001 PATENT APPLICATION: US/09/677,822 TIME: 10:10:42

Input Set : A:\GC527C2-seqlist.txt
Output Set: N:\CRF3\07272001\1677822.raw

```
1073
  190 tot ato caa ago acg ott oot gga aac aaa tao ggg gog tao aac ggt
  191 Ser Ile Gln Ser Thr Leu Pro Gly Asn Lys Tyr Gly Ala Tyr Asn Gly
                               210
                                                   215
  194 acg tca atg gca tct ccg cac gtt gcc gga gcg gct gct ttg att ctt
                                                                          1121
  195 Thr Ser Met Ala Ser Pro His Val Ala Gly Ala Ala Ala Leu Ile Leu
                                               230
                          225
  196 220

√ 198 tct aag cac ccg aac tgg aca aac act caa gtc cgc agc agt tta nnn

                                                                          1169
 199 Ser Lys His Pro Asn Trp Thr Asn Thr Gln Val Arg Ser Ser Leu Xaa
                                           245
                      240
  202 aac acc act aca aaa ctt ggt gat tct ttc tac tat gga aaa ggg ctg
                                                                          1217
  203 Asn Thr Thr Thr Lys Leu Gly Asp Ser Phe Tyr Tyr Gly Lys Gly Leu
                                       260
                  255
  206 atc aac gta cag gcg gca gct cag taa aacataaaaa accggccttg
                                                                          1264
  207 Ile Asn Val Gln Ala Ala Ala Gln
  208
              270
  210 gccccgccgg tttttttatt tttcttcctc cgcatgttca atccgctcca taatcgacgg 1324
  212 atggctccct ctgaaaattt taacgagaaa cggcgggttg acccggctca gtcccgtaac 1384
  214 ggccaagtcc tgaaacgtct caatcgccgc ttcccggttt ccggtcagct caatgccgta 1444
  216 acggtcggcg gcgttttcct gataccggga gacggcattc gtaatcggat c
  219 <210> SEQ ID NO: 2
  220 <211> LENGTH: 382
  221 <212> TYPE: PRT
  222 <213> ORGANISM: Bacillus amyloliquefaciens
  224 <220> FEATURE:
  225 <221> NAME/KEY: VARIANT
  226 <222> LOCATION: (163)...(163)
  227 <223> OTHER INFORMATION: Xaa = Asn or Pro
  229 <220> FEATURE:
  230 <221> NAME/KEY: VARIANT
  231 <222> LOCATION: (164)...(164)
  232 <223> OTHER INFORMATION: Xaa = Pro or Asn
  234 <220> FEATURE:
  235 <221> NAME/KEY: VARIANT
236 <222> LOCATION: (167)...(167)
  237 <223> OTHER INFORMATION: Xaa = Asn or Asp
  239 <220> FEATURE:
  240 <221> NAME/KEY: VARIANT
  241 <222> LOCATION: (195)...(195)
  242 <223> OTHER INFORMATION: Xaa = Ala or Ser
  244 <220> FEATURE:
  245 <221> NAME/KEY: VARIANT
  246 <222> LOCATION: (196)...(196)
  247 <223> OTHER INFORMATION: Xaa = Ser or Ala
  249 <220> FEATURE:
  250 <221> NAME/KEY: VARIANT
  251 <222> LOCATION: (205)...(205)
  252 <223> OTHER INFORMATION: Xaa = Ala or Asp
  254 <220> FEATURE:
  255 <221> NAME/KEY: VARIANT
```

RAW SEQUENCE LISTING DATE: 07/27/2001 PATENT APPLICATION: US/09/677,822 TIME: 10:10:42

Input Set : A:\GC527C2-seqlist.txt
Output Set: N:\CRF3\07272001\I677822.raw

```
256 <222> LOCATION: (206)...(206)
     257 <223> OTHER INFORMATION: Xaa = Asp or Ala
     259 <220> FEATURE:
     260 <221> NAME/KEY: VARIANT
     261 <222> LOCATION: (265)...(265)
     262 <223> OTHER INFORMATION: Xaa = Thr or Ser
     264 <220> FEATURE:
     265 <221> NAME/KEY: VARIANT
     266 <222> LOCATION: (266)...(266)
     267 <223> OTHER INFORMATION: Xaa = Ser or Thr
     269 <220> FEATURE:
    270 <221> NAME/KEY: VARIANT
     271 <222> LOCATION: (358)...(358)
     272 <223> OTHER INFORMATION: Xaa = Gln or Glu
     274 <400> SEQUENCE: 2
     275 Met Arg Gly Lys Lys Val Trp Ile Ser Leu Leu Phe Ala Leu Ala Leu
                           5
     277 Ile Phe Thr Met Ala Phe Gly Ser Thr Ser Ser Ala Gln Ala Ala Gly
     278
     279 Lys Ser Asn Gly Glu Lys Lys Tyr Ile Val Gly Phe Lys Gln Thr Met
                  35
     281 Ser Thr Met Ser Ala Ala Lys Lys Lys Asp Val Ile Ser Glu Lys Gly
     283 Gly Lys Val Gln Lys Gln Phe Lys Tyr Val Asp Ala Ala Ser Ala Thr
                                                  75
     285 Leu Asn Glu Lys Ala Val Lys Glu Leu Lys Lys Asp Pro Ser Val Ala
     287 Tyr Val Glu Glu Asp His Val Ala His Ala Tyr Ala Gln Ser Val Pro
                                                              110
                                         105
                     100
     289 Tyr Gly Val Ser Gln Ile Lys Ala Pro Ala Leu His Ser Gln Gly Tyr
                                     120
     290
                 115
     291 Thr Gly Ser Asn Val Lys Val Ala Val Ile Asp Ser Gly Ile Asp Ser
     292
                                 135
     293 Ser His Pro Asp Leu Lys Val Ala Gly Gly Ala Ser Met Val Pro Ser
     294 145
                             150
W--> 295 Glu Thr Xaa Xaa Phe Gln Asp(Xaa) Asn Ser His Gly Thr His Val Ala
                                             170
                       165
     297 Gly Thr Val Ala Ala Leu Asn Asn Ser Ile Gly Val Leu Gly Val Ala
                                                           / 190
                    180/
                                         185
الملح> 299 Pro Ser Xaa Xaa Leu Tyr Ala Val Lys Val Leu Gly Xaa Xaa Gly Ser
                                                          205
                 195
                                     200
     301 Gly Gln Tyr Ser Trp Ile Ile Asn Gly Ile Glu Trp Ala Ile Ala Asn
                                 215
             210
     303 Asn Met Asp Val Ile Asn Met Ser Leu Gly Gly Pro Ser Gly Ser Ala
                                                  235
                             230
     305 Ala Leu Lys Ala Ala Val Asp Lys Ala Val Ala Ser Gly Val Val Val
                                           ~ 250.
                         245
     306
    307 Val Ala Ala Gly Asn Glu Gly Xaa Xaa Gly Ser Ser Ser Thr Val
     308
                                         265
```

Use of n and/or Xaa has been detected in the Sequence Listing. Review the Sequence Listing to insure a corresponding explanation is presented in the <220> to <223> fields of each sequence using n or Xaa.

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/677,822

DATE: 07/27/2001 TIME: 10:10:43

Input Set : A:\GC527C2-seqlist.txt

Output Set: N:\CRF3\07272001\1677822.raw

```
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:150 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L\!:\!151 M\!:\!341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:154 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:155 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:158 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L\!:\!159 M\!:\!341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:162 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:163 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:178 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:179 \ M:341 \ W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:198 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:199 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:295 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:299 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:307 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L\!:\!319 M\!:\!341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
```